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IN THE UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

CV 09 5370

CENTER FOR BIOLOGICAL DIVERSITY, and THE BAY INSTITUTE,

Plaintiffs,

v.

KEN SALAZAR, Secretary of Department of the Interior, and U.S. FISH and WILDLIFE SERVICE,

Defendants.

Case No.:

COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

I. INTRODUCTION

1. Plaintiffs CENTER FOR BIOLOGICAL DIVERSITY and THE BAY INSTITUTE bring this action against Defendants KEN SALAZAR, Secretary of the Department of the Interior and the U.S. FISH AND WILDLIFE SERVICE (collectively "the Secretary") to remedy the Secretary's violations of the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531 *et seq.*, related to the Secretary's failure to protect the San Francisco Bay Delta population of longfin smelt ("SFBD longfin smelt") as threatened or endangered under the ESA. *See* 16 U.S.C. §§ 1533(a)(1), (b)(1) & (b)(3)(B).

2. The longfin smelt (*Spirinchus thaleichthys*) is a medium sized, estuarine-anadromous fish associated with estuaries along the eastern Pacific coast, found from the San Francisco Bay-Delta Estuary north to Prince William Sound, Alaska. Its sides are a translucent-silver with an olive to pink iridescent back. Mature males are typically darker than females, and have enlarged and stiffened dorsal and anal fins. Its most distinctive characteristic is its long pectoral fin which gives the longfin smelt its common name.

3. The San Francisco Bay-Delta population of longfin smelt, the subject of this complaint, is the southernmost population in the species' range and is by far the largest population in California. It is suffering from ongoing declines caused by reductions in freshwater flows in the Bay Delta estuary; lethal entrainment into federal, state, industrial, and local agricultural water diversions and export facilities during spawning; other major physical disruptions of habitat; and exposure to toxic pollution from the San Francisco Bay Area, in-Delta and upstream agricultural discharges, urban runoff, and other discharges.

4. On April 9, 2009, the Secretary published its decision finding that the SFBD longfin smelt "does not meet [its] definition of a distinct population segment," and determining that listing of the SFBD longfin smelt was not warranted. Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition to San Francisco Bay Delta Population of the Longfin Smelt (*Spirinchus thaleichthys*) as Endangered, 74 Fed. Reg. 16169 ("12-month finding").

5. In determining that the SFBD longfin smelt is not a listable entity, the Secretary ignored the best available science, did not give the species the benefit of the doubt, and ignored its own experts' opinions.

6. Plaintiffs now seek judicial relief declaring that the Secretary failed to properly determine whether the SFBD longfin smelt should be protected under the ESA, and ask that the Court remand the 12-month finding. Such relief is necessary to afford the SFBD longfin smelt the full protections of law to which it is entitled and so desperately needs.

II. JURISDICTION and VENUE

7. The Court has jurisdiction over this action pursuant to 16 U.S.C. §§ 1540(c) & (g) (action arising under the ESA and citizen suit provision), 28 U.S.C. § 1331 (federal question), 5 U.S.C. § 702 (the Administrative Procedure Act ("APA")), and 28 U.S.C. § 1361 (mandamus). The relief sought is authorized by 28 U.S.C. §§ 2201 (declaratory judgment), 28 U.S.C. § 2202 (injunctive relief), 16 U.S.C. § 1540(g) and 5 U.S.C. §§ 701-706.

8. As required by 16 U.S.C. § 1540(g), Plaintiffs provided the Secretary with written notice of the violations alleged herein more than 60 days prior to commencement of this action. In spite of such notice, the Secretary has failed to remedy the ESA violations.

9. An actual, justiciable controversy exists between the parties within the meaning of 28 U.S.C. § 2201.

10. Plaintiffs have no adequate remedy at law. The Secretary's continuing failure to comply with the ESA will result in irreparable harm to the SFBD longfin smelt, to Plaintiffs and Plaintiffs' members, and to the public. No monetary damages or other legal remedy can adequately compensate Plaintiffs, their members, or the public, for this harm.

11. Plaintiffs and their members are adversely affected or aggrieved by the federal agency's action and are entitled to judicial review of such action within the meaning of the ESA. The Secretary's failure to comply with the ESA's mandates prevents the full implementation of measures necessary to protect SFBD longfin smelt pursuant to the ESA. Without the substantial protections of the ESA, SFBD longfin smelt are more likely to decline and become extinct. Plaintiffs are therefore injured because their use and enjoyment of SFBD longfin smelt and their habitat is threatened by the decline and likely extinction of the fish. These are actual, concrete injuries to Plaintiffs, caused by the Secretary's failure to comply with the statutory provisions. The relief requested will fully redress those injuries.

12. The federal government has waived sovereign immunity in this action pursuant to 16 U.S.C. § 1540(g) and 5 U.S.C. § 702.

13. Venue lies in this judicial district pursuant to 28 U.S.C. § 1391 because the species is found within this judicial district.

III. INTRADISTRICT ASSIGNMENT

14. The San Francisco or Oakland Division of this judicial district is the proper assignment by virtue of Civil L.R. 3-2(d).

IV. PARTIES

15. Plaintiff CENTER FOR BIOLOGICAL DIVERSITY ("Center") is a non-profit 501(c)(3) corporation with offices in San Francisco and Los Angeles, California and elsewhere in the United States. The Center works through science, law and policy to secure a future for all species hovering on the brink of extinction. The Center's members and staff are actively involved in species and habitat protection throughout the United States and the world, including protection of the SFBD longfin smelt. The Center has 43,000 members and over 220,000 online activists. The Center brings this action on its own behalf and on behalf of its adversely affected members and staff.

16. Plaintiff THE BAY INSTITUTE ("TBI") is a non-profit corporation based in Novato, California. TBI is a research, education, and advocacy organization dedicated to protecting and restoring the ecosystems of San Francisco Bay, the Sacramento-San Joaquin Delta, and the rivers, streams, and watersheds tributary to the estuary. TBI has approximately 1,300 members in California, who live primarily in the counties surrounding the San Francisco Bay and the Sacramento and San Joaquin Valleys. TBI's members use, on a continuing and ongoing basis, the San Francisco Bay, the Delta, and the rivers of the Central Valley for recreational, educational, spiritual, and conservation activities such as fishing, boating, swimming, aesthetic enjoyment, and nature study. They intend to continue to do so on an ongoing basis in the future. Some of TBI's members own or work for businesses that are wholly or partially dependent on the fisheries of the Bay and Delta. The decline of SFBD longfin smelt and the Delta ecosystem has had serious impacts on the fisheries that some TBI members depend on for commercial or recreational fishing.

17. Plaintiffs' members and staff include individuals with varying interests in SFBD

longfin smelt and their habitat ranging from scientific, professional, and educational to recreational, aesthetic, moral, and spiritual interests. Further, Plaintiffs' members and staff have visited and intend to visit in the future those areas of the San Francisco Bay-Delta where the longfin smelt is found. Plaintiffs' members and staff utilize, on an on-going basis, the biological, scientific, research, education, conservation, recreational and aesthetic values of the San Francisco Bay-Delta that provides habitat for the longfin smelt. Plaintiffs' staff and members observe and study SFBD longfin smelt and their habitat, and derive professional, scientific, educational, recreational, aesthetic, inspirational, and other benefits from these activities and have an interest in preserving the possibility of such activities in the future. An integral aspect of the Plaintiffs' members' use and enjoyment of SFBD longfin smelt is the expectation and knowledge that the species is in its native habitat. For this reason, the Plaintiffs' use and enjoyment of SFBD longfin smelt is entirely dependent on the continued existence of healthy, sustainable populations in the wild. Plaintiffs bring this action on their own behalf and on behalf of their adversely affected members and staff.

18. Concerned that the SFBD longfin smelt is at serious risk of extinction, the Center and TBI submitted the petition at issue herein to list the species as endangered or threatened under the ESA. Unless the SFBD longfin smelt is protected under the ESA, and threats to the species addressed, the species is likely to decline and become extinct. Therefore, Plaintiffs' members and staff are injured by the Secretary's failure to protect the species as is required by the ESA. This injury caused by the Secretary's failure to comply with the ESA is actual, concrete, and imminent. The Secretary's failure to comply with the ESA's requirements deprives the species of statutory protection vitally necessary to its survival. The relief requested will redress these injuries.

19. Defendant KEN SALAZAR, Secretary of the Department of the Interior, is responsible for the administration and implementation of the ESA with regard to the SFBD longfin smelt, and for compliance with all other federal laws applicable to the Department of the Interior. He is sued in his official capacity.

20. Defendant U.S. FISH AND WILDLIFE SERVICE ("FWS") is a federal agency within the Department of the Interior and is required by law to protect and manage the wildlife of the United States, including enforcing and implementing the ESA. FWS has been delegated authority by the

Secretary of the Interior to implement the ESA for the SFBD longfin smelt, including the responsibility for making decisions and promulgating regulations, including proposed and final listing decisions and the processing of petitions for such actions.

V. LEGAL AND FACTUAL BACKGROUND

A. The Endangered Species Act

21. The ESA is a federal statute enacted to conserve endangered and threatened species and the ecosystems upon which they depend. 16 U.S.C. § 1531(b).

22. The ESA protects species listed as either "endangered" or "threatened" by the Secretary. A species is "endangered" if it "is in danger of extinction throughout all or a significant portion of its range." 16 U.S.C. § 1532(6). A species is "threatened" if it is "likely to become an endangered species within the foreseeable future." 16 U.S.C. § 1532(20).

23. The Secretary must list a species as endangered or threatened if it finds any of the following factors with regard to a species:

(A) the present of threatened destruction, modification, or curtailment of its habitat or range;

(B) overutilization for commercial, recreational, scientific, or educational purposes;

(C) disease or predation;

(D) the inadequacy of existing regulatory mechanisms; or

(E) other natural or manmade factors affecting its continued existence.

16 U.S.C. § 1533(a)(1)(A-E).

24. The term "species" is defined broadly under the ESA to include "any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature." 16 U.S.C. § 1532 (16).

25. A distinct population segment ("DPS") of a vertebrate species can be protected as a "species" under the ESA even though it has not formally been described as a "species" in the scientific literature. A species may be composed of several DPSs, some or all of which warrant listing under the ESA.

26. The Secretary has published a policy for the recognition of DPSs for the purposes of listing, delisting, and reclassifying species under the ESA. Policy Regarding the Recognition of

Distinct Vertebrate Population Segments Under the Endangered Species Act, 61 Fed. Reg. 4722 (Feb. 7, 1996). Under this policy, once a population segment is found to be both "discrete" and "significant," then it is deemed a separate "species" for the purposes of the ESA and may be considered for listing under the Act.

27. Under the Secretary's DPS policy a population segment of a vertebrate species is discrete if it satisfies *either* of the following conditions:

> 1. It is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors. Quantitative measures of genetic or morphological discontinuity may provide evidence of the separation.
>
> 2. It is delimited by international governmental boundaries within which differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist that are significant in light of section 4(a)(1)(D) of the Act.

61 Fed. Reg. at 4722, 4725.

28. The Secretary's DPS policy requires that once a population is established as discrete, then the biological and ecological significance is next considered. Each population segment's significance must be analyzed on a case-by-case basis. This consideration may include, but is not limited to, the following:

> 1. Persistence of the discrete population segment in an ecological setting unusual or unique to this taxon.
>
> 2. Evidence that loss of the discrete population would result in a significant gap in the range of a taxon.
>
> 3. Evidence that the discrete population segment represents the only surviving natural occurrence of a taxon that may be more abundant elsewhere as an introduced population outside its historical range.
>
> 4. Evidence that the discrete population segment differs markedly from other populations of the species in its genetic characteristics.

61 Fed. Reg. 4722.

29. In order to ensure the timely protection of species, Congress set forth the listing process

described below. The process includes mandatory, non-discretionary deadlines for the three required findings that the Secretary must meet, so that species in need of protection do not languish in administrative purgatory. The three required findings, described below, are the 90-day finding, the 12-month finding, and the final listing determination.

30. Any interested person can begin the listing process by filing a petition to list a species with the Secretary. 16 U.S.C. § 1533 (b)(3)(A); 50 C.F.R. § 424.14(a).

31. Upon receipt of a petition to list a species, the Secretary has 90 days "to the maximum extent practicable," to make a finding as to whether the petition "presents substantial scientific or commercial information indicating that the petitioned action may be warranted." 16 U.S.C § 1533 (b)(3)(A); 50 C.F.R. § 424.14 (b)(1). If the Secretary finds that the petition presents substantial information indicating that the listing may be warranted, the Secretary then publishes in the Federal Register a "90-day finding and commencement of status review." 16 U.S.C. § 1533(b)(3)(A).

32. Upon issuing a positive 90-day finding, the Secretary must then conduct a full review of the status of the species. 50 C.F.R. § 424.14. Upon completion of this status review, and within 12 months from the date that it received the petition, the Secretary must make one of three findings: (1) the petitioned action is not warranted; (2) the petitioned action is warranted; or (3) the petitioned action is warranted but presently precluded by other pending proposals for listing species, provided certain circumstances are present. 16 U.S.C. § 1533(b)(3)(B); 50 C.F.R. § 424.14 (b)(3). This second determination is known as a "12-month finding."

33. If the Secretary finds in the 12-month finding that the listing of the species is warranted, then he must publish in the Federal Register a proposed rule, for public comment, to list such species as endangered or threatened. 16 U.S.C. § 1533(b)(5).

34. Within one year of the publication of a proposed rule to list a species, the ESA requires the Secretary to publish a final listing determination in the Federal Register. 16 U.S.C. § 1533(b)(6)(A). At such time, the Secretary must either list the species or withdraw the proposal. 16 U.S.C. § 1533(b)(6)(A)(i).

35. Once a species is listed, an array of statutory protections applies. For example, Section 7 requires all federal agencies to ensure that their actions neither "jeopardize the continued existence"

of any listed species nor "result in the destruction or adverse modification" of its "critical habitat." 16 U.S.C. § 1536(a)(2).

36. Additionally, ESA Section 9 and its regulations prohibit, among other things, any person from intentionally taking listed species or incidentally taking listed species without a permit from the Secretary. 16 U.S.C. §§ 1538(a)(1)(B) & 1539.

37. "Take" is defined broadly under the ESA to mean to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." 16 U.S.C. § 1532(19).

B. Longfin smelt in the San Francisco Bay Delta

38. Longfin smelt are one of seven osmerid (member of the smelt family, *Osmeridae*) fish species that occupy habitats in California estuaries and coastal waters. Historically, the SFBD longfin smelt was considered to be a separate species from longfin smelt populations to the north. However, genetic analyses has confirmed that SFBD longfin smelt are the same species as longfin smelt from Lake Washington, Washington. However, the same genetic analyses also concluded that the gene pool of the SFBD population is significantly different and isolated from the landlocked Washington population of longfin smelt.

39. The distribution and range of the SFBD longfin smelt extends from Rio Vista (on the Sacramento River in the Delta) and Medford Island (on the San Joaquin River in the Delta) through Suisun Bay and Suisun Marsh, San Pablo Bay, and the South Bay, and into the Gulf of the Farallones, just outside of the Golden Gate.

40. Based on meristic and genetic analyses, there is no evidence that large numbers of longfin smelt migrate between populations within their eastern Pacific range or even along the California coast. It is unknown whether the few longfin smelt that are occasionally captured in the Russian River or Bodega Bay were spawned in the areas where they were captured or migrated from the San Francisco estuary. It is highly unlikely that the SFBD population is sustained or even supplemented by immigration from these other areas because these peripheral populations are so small.

41. Longfin smelt are a pelagic (they live in open waters), estuarine-anadromous species.

They tolerate a wide range of salinities and are capable of living in fresh, brackish and marine waters. Most of their life cycle is completed in brackish to marine waters, with most post-larval fish in the SFBD population found in salinities from 15-30 practical salinity units.

42. The SFBD longfin smelt is found in open waters throughout the San Francisco estuary and in the larger channels and sloughs of Suisun Marsh. During fall and winter, its numbers are greatest in the northern estuary, although they are also found in shallow bays such as San Pablo Bay and the South Bay. During the summer, higher densities are found in the Central Bay.

43. SFBD longfin smelt have a two-year life cycle. Spawning is believed to take place in fresh or slightly brackish water over sandy or gravel substrates mainly downstream of Rio Vista on the Sacramento River between January and March.

44. The historical principal prey for adult longfin smelt are believed to have been opossum shrimp (*Neomysis mercedis*) and other small crustaceans (*Acanthomysis* sp.). Copepods and other crustaceans are also important prey. SFBD longfin smelt are probably preyed upon by other fish, birds, and marine mammals, but given their former abundance, they were believed to play a critical role in the SF estuary food web.

45. During the 19th century, the SFBD longfin smelt was an important component of a large smelt fishery in the San Francisco estuary. An extreme drought and record high water diversions cause the sharp decline of SFBD longfin smelt abundance 1987-1992. Levels fell more than 80% in two years, and remained at record low levels until wet hydrological conditions returned in 1995. Over the next five years, the species partially recovered to levels that were approximately 50% of the species' pre-drought abundance.

46. Since the late 1990s, the abundance of SFBD longfin smelt has been declining throughout the San Francisco estuary, except in Suisun Marsh, where the species was never abundant. By 2001, SFBD longfin smelt abundance was just 6% of the average levels measured during the late 1990s. Beginning in 2003, SFBD longfin smelt numbers fell to 1% of pre-drought levels for three consecutive years. Unlike the previous population decline, which occurred during the multi-year drought, hydrological conditions during the 2000s were moderate, indicating that other factors contributed to this recent population decline.

47. Because SFBD longfin smelt abundance is highly correlated with springtime fresh water outflow from the delta, much of the observed inter-annual variation reflects the watershed's variable hydrology and the effects of water management operations. Failure of the species to fully recover following improved hydrological conditions may reflect lower resilience attributable to its extremely low population numbers as well as degraded habitat conditions associated with continued high levels of water diversions and exports, the invasive clam's impact on the planktonic food web, and the numerous other threats to the species, including entrainment losses at agricultural and industrial diversions, toxics, dredging, and pile driving.

48. The SFBD population is almost certain to be reproductively isolated from other conspecific population units because of the large distance between the San Francisco estuary and the location of the nearest self-sustaining population. Given this spatial isolation and its position at the southern extreme of the species' range, this population represents an important component of the evolutionary legacy of the species; due to its size relative to other longfin smelt populations in California and along the Pacific Coast, the conservation of this population may be essential for the evolutionary diversity of the species.

C. The Longfin smelt Petitioning Process

49. On August 8, 2007, the Center and TBI submitted a formal, detailed petition to list the SFBD longfin smelt under the ESA ("Petition").[1] On May 6, 2008, the Secretary made a positive 90-day finding on the Petition in which it concluded the Petition provided substantial information indicating that listing the SFBD longfin smelt as a DPS may be warranted and initiating a 60-day public comment period. Endangered and Threatened Wildlife and Plants; Petition to List the San Francisco Bay-Delta Population of the Longfin Smelt (*Spirinchus thaleichthys*) as Endangered, 73 Fed. Reg. 24911-24915.

50. Only after the Center sent the Secretary a notice of its intent to sue for its failure to

[1] On that same day, The Bay Institute, the Center for Biological Diversity, and the Natural Resources Defense Council petitioned the California Fish and Game Commission ("Commission") to list the longfin smelt as an endangered species under the California Endangered Species Act ("CESA"). *See* Cal. Fish & Game Code §§ 2070-2079. On March 5, 2009 the Commission agreed to list the longfin smelt as threatened throughout their range in California.

publish a timely 12-month finding, the Secretary published its decision on April 9, 2009, determining that listing the SFBD longfin smelt was not warranted because it "does not meet our definition of a distinct population segment." Fed. Reg. 16169. The Secretary simultaneously announced that it was initiating a status assessment of the longfin smelt, and is soliciting information on the status of the species range-wide.

51. By written notices to the Secretary, sent via facsimile and certified mail on August 17, 2009, Plaintiffs informed the Secretary of the violations set forth in their Complaint as required by the ESA. 16 U.S.C. § 1540(g).

D. The Listing Determination

52. As detailed in the Secretary's 90-day finding, the Petition "presents substantial scientific or commercial information to indicate that the San Francisco Bay-Delta population of longfin smelt may be a DPS based on its separation from other populations of longfin smelt, the unique setting in which it occurs, and potential genetic differences between the San Francisco Bay-Delta population and other longfin smelt populations." Endangered and Threatened Wildlife and Plants; Petition To List the San Francisco Bay-Delta Population of the Longfin Smelt (Spirinchus thaleichthys) as Endangered, 73 Fed. Reg. 24911, 24914.

53. Yet, in its 12-month finding, published April 9, 2009, the Secretary completely and inexplicably reversed course, finding that the SFBD longfin smelt does not meet its definition of a DPS and on that basis does not warrant listing. 74 Fed. Reg. 16169.

54. Under the DPS policy, if the Secretary determines that a population is discrete, the Secretary must then consider its significance. If a population is determined to be both discrete and significant, then the Secretary must determine whether it meets the five factors for listing. 61 Fed. Reg. 4725. In this instance, the Secretary erroneously found that the SFBD longfin smelt was not discrete and failed to undertake any analysis of its significance or of the other listing factors.

55. The Secretary's "not warranted" determination for the SFBD longfin smelt is arbitrary, capricious, unsupported by the evidence in the record, and otherwise unlawful because it: (1) did not rely on the best available science; (2) did not give the species the benefit of the doubt; and (3) ignored its own experts' opinions.

VI. VIOLATIONS OF LAW

56. The Petition presented substantial scientific information indicating that the SFBD longfin smelt is a DPS. 73 Fed. Reg. 24911, 24914. Dr. Peter Moyle, an expert on SFBD longfin smelt, and a biologist whose work is frequently cited in the 12-month finding, asserts that the SFBD longfin smelt is a discrete population warranting ESA protections. Furthermore, all available scientific information and monitoring data indicate that the abundance of longfin smelt in all major estuaries in California, the southern extent of the species' range, has declined severely in the past two decades; the SFBD population has reached record low levels; and that in some smaller estuaries to the north, the species may already be extirpated.

57. Congress did not define "distinct population segment" in the ESA, but in 1996, the Secretary issued a policy interpreting the phrase that requires the consideration of (1) the discreteness of the population segment in relation to the remainder of the species to which it belongs; (2) the significance of the population segment in relation to the species to which it belongs; and (3) the population segment's conservation status in relation to the ESA's standards for listing. Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act, 61 Fed. Reg. 4722, 4725 (Feb. 7, 1996).

58. Under the DPS policy a population segment of a vertebrate species is discrete if it: (1) is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors; *or* (2) is delimited by international governmental boundaries within which differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist that are significant in light of section 4(a)(1)(D) of the Act. Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act, 61 Fed. Reg. 4722 (Feb. 7, 1996).

59. In authorizing the listing of a DPS under the ESA, Congress recognized "that there may be instances in which FWS should provide for different levels of protection for populations of the same species." S. Rep. no. 96-151, 96th Cong., 1st Sess. (1979), reprinted in *A Legislative History of the Endangered Species Act*, 97th Cong., 2d Sess. 1397 (1982).

60. The SFBD longfin smelt is a discrete population as its geographic isolation makes it

highly unlikely that it migrates between populations within its range and likely that it is reproductively isolated from other population units. Therefore, the Secretary's finding that the SFBD population is not discrete is in violation of the ESA because it did not rely on the best available science, give the species the benefit of the doubt, and it ignored its own experts.

61. The Secretary acknowledges that the SFBD longfin smelt is the southernmost self-sustaining population, with its nearest neighboring, relatively-small, and possibly no longer existing, populations found in the lower reaches and estuaries of the Klamath, Eel, Van Duzen, and Russian Rivers, and that it is unknown how far longfin smelt are able to swim in the open ocean. 74 Fed. Reg. at 16172.

62. The best science available indicates that longfin smelt were once found in many estuaries, but the Bay-Delta system now likely holds the only self-sustaining population in California. The best science available also indicates that "the subpopulation of longfin smelt in the San Francisco Estuary...has been isolated from other populations of longfin smelt for a long period of time." Reclamation: Managing Water in the West, *Spawning, Early Life Stage, and Early Life Histories of the Osmerids Found in the Sacramento-San Joaquin Delta of California*, v. 38 (Oct. 2007), citing P.B. Moyle, *Inland Fisheries of California*, 2002.

63. In contrast, the best scientific evidence does not support the Secretary's findings in the 12-month decision that smelt are being moved or transported via currents between the San Francisco Bay-Delta estuary and other unnamed estuaries to the north, that it is likely that "individuals have the ability to swim into and out of ocean currents and into and between estuaries outside of the San Francisco Bay-Delta estuary," or that the SFBD longfin smelt might be able to reach rivers that are from 75 to 300 miles north of the Bay-Delta. 74 Fed. Reg. 16172-16173. More importantly, it is unlikely that any longfin smelt from these remote estuaries are able to migrate to the Bay-Delta, or do so frequently enough to contribute to the population dynamics of the SFBD longfin smelt. Yet, without any scientific evidence, and in fact, with evidence to the contrary, the Secretary made these assertions in support of its conclusion that the SFBD longfin smelt is not discrete.

64. The swimming performance and behavior of SFBD longfin smelt have not been studied. There is no evidence that either the swimming capacity or swimming behavior of SFBD

longfin smelt is similar to that of salmonid smolts, as suggested by the Secretary. 74 Fed. Reg. 16171. However, the SFBD longfin smelt *is* of similar size and morphology to delta smelt, another osmerid from the San Francisco estuary which is partially sympatric with longfin smelt. Published research on delta smelt swimming performance and behavior show these fish are unsteady swimmers, capable of only moderate maximum sustained swimming speeds, and prefer low velocity routine swimming speeds. Swanson, C., P.S. Young, and J.J. Cech, Jr. 1998. Swimming performance of delta smelt: maximum performance, and behavioral and kinematic limitations of swimming at submaximal velocities. Journal of Experimental Biology 201:333-345.

65. Because of the distances involved, it is highly unlikely that SFBD longfin smelt from the San Francisco estuary regularly migrate to and reproduce in watersheds far to the north of the estuary. In fact, Plaintiffs are informed and believe and based thereon allege that there is no evidence supporting the Secretary's conclusion that this is possible, and the best available science supports the contrary. Furthermore, because of the orientation of the currents, it is even more unlikely that fish from populations to the north migrate and reproduce within the San Francisco estuary with sufficient frequency to erode the marked separation between the SFBD population and any other population.

66. The Secretary is required to use the best scientific and commercial data available. 16 U.S.C. § 1533(b)(1)(A). The Secretary violated this standard by ignoring the best available science that indicates that the SFBD longfin smelt is geographically isolated, and by instead relying on information not supported by the evidence on record. The Secretary does not offer any published or unpublished papers to refute the conclusions of the best available science.

67. To the extent that there is uncertainty about what constitutes best available science, the species must be given the benefit of the doubt. Deference to the Secretary is only warranted where it utilizes, rather than ignores the analysis of its experts.

68. In 1995, the Secretary stated that the SFBD longfin smelt "is isolated from other populations." 1995 Sacramento/San Joaquin Delta Native Fisheries Recovery Plan, pp. 47-65. The Secretary does not offer any explanation for reversing its previous determination in this 12-month finding. Rather than give the species the benefit of the doubt and rely on the best available science, and its own experts' opinions that the population is isolated, the Secretary inexplicably and

impermissibly adopted an untested hypothesis that the SFBD longfin smelt may be able to swim 75 to 300 miles through the Pacific Ocean to other estuaries and is therefore not discrete.

69. The Secretary also unlawfully ignored the findings of the Stanley study, the only available study on longfin smelt that indicates that the San Francisco Bay-Delta population is markedly genetically separate from other populations of longfin smelt and should be managed as an isolated and genetically distinct entity. 74 Fed. Reg. 16173.

70. Under the Secretary's DPS policy, a population is discrete if it is "markedly separated from other populations of the same taxon." Such separation may be evidenced by "[q]uantitative measures of genetic or morphological discontinuity." 61 Fed. Reg. 4725. In making this finding, the Secretary cannot dismiss a study because it is anecdotal or its design is less than ideal for the particular application.

71. The Secretary dismissed the Stanley study that compared two sampling locations because "[a] more appropriate comparison would have been to analyze longfin smelt from a series of locations with access to the open ocean." 74 Fed. Reg. 16173.

72. The Secretary cannot ignore credible evidence such as the Stanley study which indicates the SFBD longfin smelt is markedly genetically separate from other populations of longfin smelt. Therefore, the Secretary also violated the ESA by failing to adequately consider the best available evidence which shows that the SFBD longfin smelt is discrete and warrants listing as an endangered or threatened species.

73. As a DPS, the SFBD population of longfin smelt meets the criteria for listing as an endangered species due to ongoing declines caused by reductions in freshwater flows in the Bay-Delta estuary; lethal entrainment into federal, state, industrial, and local agricultural water diversions and export facilities during spawning; other major physical interruptions of habitat, such as dredging; and exposure to toxic pollution from the San Francisco Bay area, in-Delta and upstream agricultural and urban runoff and discharges.

74. Despite these ongoing declines and the critical need to protect the SFBD longfin smelt, the Secretary's erroneous finding that the SFBD population is not a DPS has unlawfully denied critically needed ESA protections to this species.

VII. CLAIM FOR RELIEF

(Against all Defendants for Violations of the Endangered Species Act)

75. Plaintiffs re-allege and incorporate by reference all the allegations set forth in this Complaint, as though fully set forth below.

76. On April 9, 2009, the Secretary published a 12-month finding that the SFBD longfin smelt does not meet the Secretary's definition of a distinct population segment and on that basis found listing not warranted. 74 Fed. Reg. 16169.

77. The Secretary violated the ESA by finding that the SFBD longfin smelt is not a distinct population segment and that listing the species as threatened or endangered was not warranted.

78. The Secretary's finding that the SFBD longfin smelt is not a distinct population segment and that listing the species as threatened or endangered was not warranted was arbitrary, capricious, and inconsistent with the law because the Secretary failed to utilize the best available scientific data as required by the ESA. 16 U.S.C. § 1533(b)(1)(A).

79. The Secretary's finding that the SFBD longfin smelt is not a distinct population segment and that listing the species as threatened or endangered was not warranted was arbitrary, capricious, and inconsistent with the law because the Secretary did not give the species the benefit of the doubt.

80. The Secretary's finding that the SFBD longfin smelt is not a distinct population segment and that listing the species as threatened or endangered was not warranted was arbitrary, capricious, and inconsistent with the law because the Secretary ignored its own experts' opinions.

81. The Secretary's finding that the SFBD longfin smelt is not a distinct population segment and that listing the species as threatened or endangered was not warranted was arbitrary, capricious, and unsupported by the evidence in the record. The Secretary's violation of the ESA is subject to judicial review under the ESA, 16 U.S.C. § 1540(g)(1)(C), and the APA, 5 U.S.C. §§ 701 through 706.

PRAYER FOR RELIEF

For the reasons stated above, Plaintiffs respectfully request that the Court grant the following relief:

1. Declare that the Secretary's finding that the SFBD longfin smelt is not a distinct population segment and that listing the species as threatened or endangered was not warranted, is arbitrary, capricious, violated the ESA, and is unlawful;

2. Remand the 12-month finding to the Secretary for an adequate finding that complies with all requirements of the ESA by a date certain;

3. Award Plaintiffs their costs of litigation, including reasonable attorneys fees under the citizen suit provision of the ESA and/or the Equal Access to Justice Act; and

4. Grant Plaintiffs such other relief as the Court deems just and proper.

Dated: November 13, 2009

Respectfully submitted,

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